## REMARKS

Claims 1-6 are currently pending. Claims 7-30 were cancelled by the Election dated November 14, 2005. By this amendment, claim 1 has been amended and claims 2-6 are unchanged. Applicant also adds new claims 31-36.

## Claim Rejections 35 USC § 103

The Examiner has rejected claims 1 and 3 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,028,804 ("Lauw") in view of U.S. Patent No. 4,417,194 ("Curtiss").

Certain embodiments of the present invention relate to a control system that can be used to help avoid an islanding condition. As such, in most instances, the control system would be employed in a distributed power system that includes one or more generators, one or more local loads, and a grid. A potential hazard arises in a distributed power system when the power produced by the generator exactly matches the load and a segment of the grid is shut down for service (see page 1, lines 15-23 of the specification).

As amended, independent claim 1 recites:

> An engine control system suited for use with an engine that outputs electrical power to a local load and is electrically connected to an electrical grid, the engine control system comprising:
>
> a set point control operable to set an engine power output value;
>
> a sensor operable to measure an electrical difference parameter between the engine and the electrical grid; and
>
> a master control system operable to maintain the engine electrical power at about the engine power output value, the master control system also operable to vary the engine power output value to maintain the electrical difference parameter above a non-zero predetermined value.

Lauw discloses a generator 50 that supplies power to a grid 34. The generator 50 is connected to a hydro turbine 36 that is controlled by a turbine controller 110. A power demand reference means 108 is set by the turbine controller 110 and is used "for establishing a real power demand signal...corresponding to a real power demand...of the grid." *Column 36, lines 14-19.* During operation, the turbine controller 110 transmits a turbine controller signal (g) to the hydro turbine 36 in accordance with the power demand reference means 108. The hydro turbine 36 uses the turbine controller signal (g) to open or close a hydro inlet of the hydro turbine 36, which affects how much power is provided to the grid 34. Reactive and real power sensors (82 and 84, respectively) monitor how much power is provided to the grid 34.

Lauw does not disclose a turbine controller 110 that is operable to vary the turbine's output to maintain an electrical difference parameter between the turbine 36 and the grid 34 above a non-zero predetermined value. As described above, the turbine controller 110 does establish a power demand reference signal that corresponds to the power demand of the grid 34. However, the turbine controller 110 does not monitor or maintain an electrical difference parameter between the turbine 36 and the grid 34. For example, if the grid 34 of Lauw demanded no power (e.g., the grid 34 was down), the turbine controller 110 would send a power demand reference signal of zero to the turbine 36. As a result, the turbine 36 would close the hydro inlet, and electricity would stop flowing to the grid. Accordingly, all electrical parameters between the turbine 36 and the grid 34 would be zero.

In fact, Lauw teaches away from the engine control system recited in claim 1. Lauw does disclose a turbine controller 110 that can be used to vary the output of the turbine 36; however, the condition under which the turbine controller 110 alters the output of the turbine 36 is exactly the opposite of that recited in claim 1. As described above, the turbine controller 110 receives real and reactive power information from the sensors 82 and 84, and uses the power information to establish "a real power demand signal...corresponding to a real power demand...of the grid." *Column 36, lines 14-19.* The turbine controller 110 then attempts to match the power required by the grid by altering the hydro inlet of the turbine 36. Matching the power demand of the grid (which supplies the undisclosed load of the system 10) with the output of the turbine 36 is analogous to creating a zero difference between the turbine 36 and the grid.

Curtiss does not cure the deficiencies of Lauw. Curtiss discloses a system 10 having an engine 24 that supplies power to a load 18. Power is also supplied to the load 18 by an external power grid (see Fig. 1). The line 14 from the grid to the load 18 can be opened and closed with a switch 16. Controllers 30, 34, and 36 are used to provide power factor correction for power supplied to the load 18 from the engine 24 and the grid, so that when the switch 16 is closed (i.e., power is supplied to the load 18 by the grid and the engine 24) the power factor is matched. The system 10 of Curtiss does not, however, disclose a controller that is operable to vary the engine power output in order to maintain an electrical difference parameter between the engine 24 and the grid that is above a non-zero predetermined value. In fact, the controllers 30, 34, and 36 of Curtiss cannot maintain a non-zero electrical difference parameter on the line 14 between the grid and the load 18, because the load can be disconnected by the switch 16. Disconnecting the load 18 by the switch 16 would inevitably lead to all electrical parameters on the line 14 between the engine 24 and the grid going to zero.

Additionally, even when the switch 16 of Curtiss is closed, the controllers 30 and 34 are not responsible for controlling the engine power output. The only function of the controllers 30 and 34 is to implement power factor correction using a capacitor array. And while the controller 28 does affect the operation and output of the engine 24, the controller 28 does not control the engine 24 in a manner that maintains a non-zero electrical difference parameter between the engine 24 and the grid. The controller 28 determines a throttle control signal 22 based on the signals of the output lines of the generator 12. *Col. 8, lines 3-6.*

In light of the arguments made herein, Applicant respectfully requests withdrawal of the rejection to independent claim 1. Claims 2-6 depend from claim 1, and are therefore patentable for at least the same reasons as claim 1 is patentable, and because they recite other patentable features.

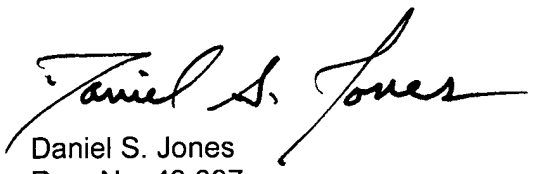
**New Claims**

New claims 31-36 generally recite an engine control system that is configured to vary the power generated by an engine to maintain a difference between the power generated by the engine and the power consumed by a load. As a result, in some instances, the engine control system can more easily avoid an islanding condition, because the output of the engine cannot be matched to the requirement of the load (i.e., the engine is either providing power to the grid, or the grid is aiding the engine in providing power to the load). As discussed above, the

Examiner's primary reference (Lauw) teaches away from this concept by seeking to match its power output to the load. Consequently, claims 31-36 are also allowable.

The Applicant respectfully requests entry of the Amendment and the allowance of Claims 1-6 and 31-36.

Respectfully submitted,



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